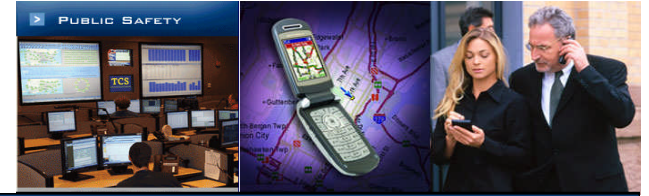# Text to 9-1-1

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Agenda

- Introduction
- The Challenge of text to 9-1-1
- The TCS Solution
- Pros and Cons
- Funding
- Conclusion

TCS Fast Facts

Established in 1987

– **Annapolis HQ, Seattle, Tampa, London**
– **Data Centers in WA, AZ, MD**
– **NOCs in Seattle and Annapolis**
– **NASDAQ: TSYS**

Strategic Offers

– **Wireless Location & Messaging Solutions**
– **Satellite Services and Deployable Systems**
– **Homeland Security**
– **Professional Services**

Industry Relations

– **Founding Member: SMS Forum, PAM Forum, IN Forum**
– **Member: 3GPP, CTIA, ETSI, GSM, NENA, APCO, OMA, TIA, ESIF, NRIC VII, IETF**

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TCS E9-1-1 Solutions

- Meets wireless E9-1-1 Phase I and Phase II FCC requirements
- Provides standards-based VoIP i2 E9-1-1 service (Owns the original i2 patent)
- Displays caller location to police, fire and emergency personnel (life-saving information)
- Supports 24/7 monitoring and operations
- Operates 2 fully redundant data centers
- Serves over 100 million subscribers
- Processes over 125,000 calls/day
- Has completed over 100,000,000 E9-1-1 calls to date
- Operates the only TL9000 certified NOC in the 911 industry

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TCS Facilities/NOC/Data Center
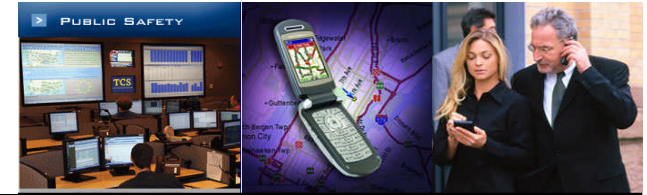
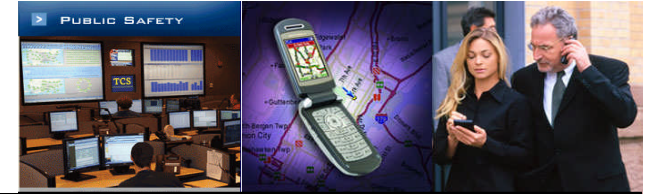**Seattle Network Operations Center**

Seattle Data Center

**Backup NOC &
Data Center
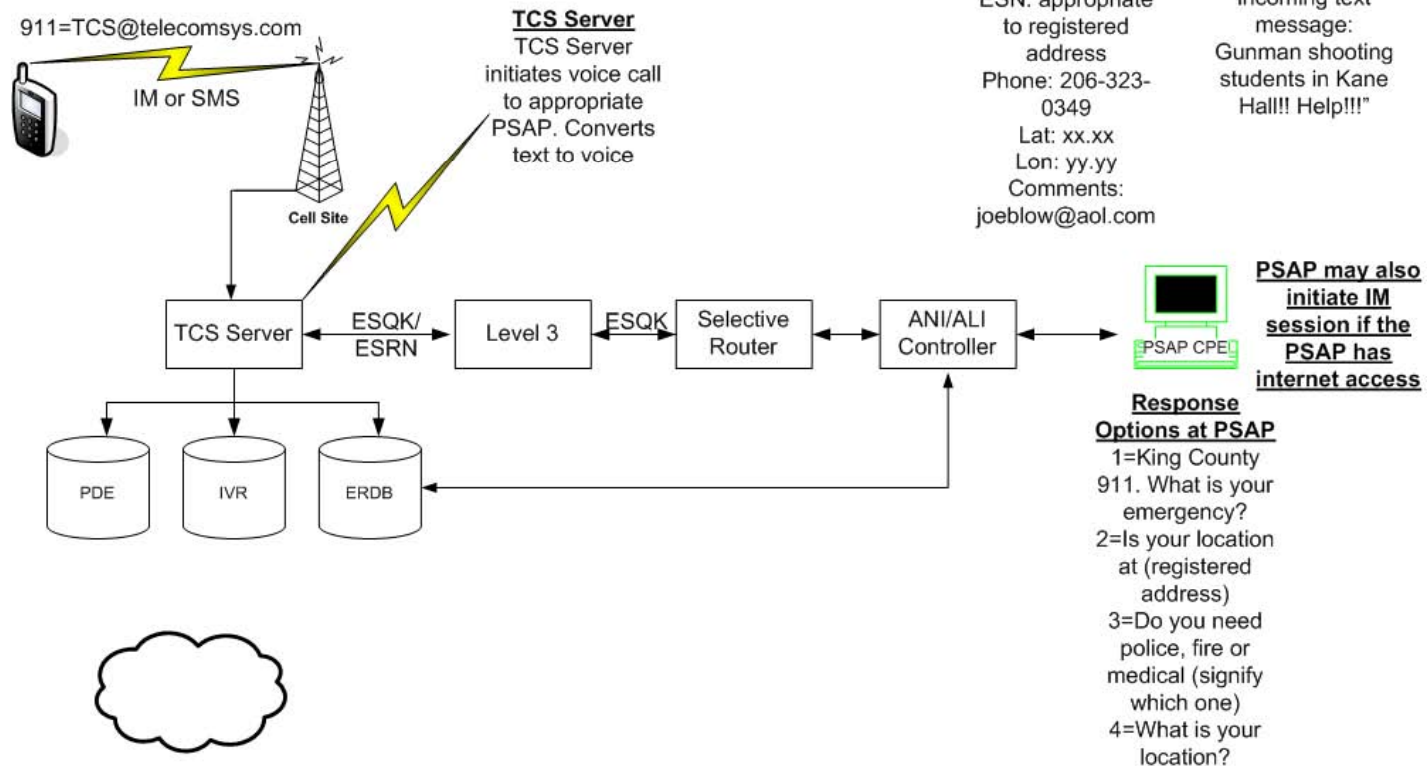Phoenix, AZ**

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Challenge of Text to 9-1-1

- PSAPs not equipped to accept text
- No financial incentive to provide text
- Next Generation solution will require
  - Infrastructure upgrades
  - PSAP upgrades

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The TCS Solution

TCS 9-1-1 Text Relay

911=TCS@telecomsys.com

IM or SMS

Cell Site

TCS Server
TCS Server initiates voice call to appropriate PSAP. Converts text to voice

TCS Server

ESQK/ESRN

Level 3

ESQK

Selective Router

ANI/ALI Controller

PSAP CPE

PDE

IVR

ERDB

Display at PSAP
Name: Joe Smith
Address: 2334 federal Ave
ESN: appropriate to registered address
Phone: 206-323-0349
Lat: xx.xx
Lon: yy.yy
Comments: joeblow@aol.com

Audio at PSAP
Text to Voice says, "This is an incoming text message: Gunman shooting students in Kane Hall!! Help!!!"

PSAP may also initiate IM session if the PSAP has internet access

Response Options at PSAP
1=King County 911. What is your emergency?
2=Is your location at (registered address)
3=Do you need police, fire or medical (signify which one)
4=What is your location?

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TCS Solution Keys

- Automatic call routing to correct PSAP

- Automatic location info in ALI data

- Automatic IM/SMS address in ALI data
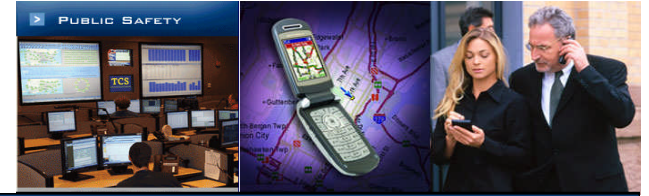
- Optional DTMF canned responses

Pros and Cons

- ## Advantages
  - – Fast access to correct PSAP
  - – No TTY headache or equipment required
  - – Works with SMS or IM (IM is more secure and is preferred by users)
  - – No upgrades to most PSAPs
  - – Works with existing handsets
  - – Location and call-back info in ALI data
  - – Less expensive (?)
  - – No registration required (location data less relaiable)
  - – Usable by anyone; not only for the deaf (VA Tech)
  - – Carrier agnostic; no carrier upgrades/provisioning

TCS

Pros and Cons

- ● Disadvantages
  - – Inflexible
  - – Some delay in sending/receiving text messages (same problem exists with existing TRS)

Non-Emergency Applications

- User-created DTMF response menus

Funding

- **TRS funding currently administered through FCC and NECA**
- **Strict rules for who qualifies for funding**
  - Must have human Comm Assistant (CA)
  - Must handle 3-way calls
  - Must handle toll calls
  - Must deal with voice mail
- **Payment to TRS based on "per minute"**
  - TCS solution could be "per message" or "per month" or something other than "per minute"
- **Not a viable market for self-supporting "enhanced services"**

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Conclusion
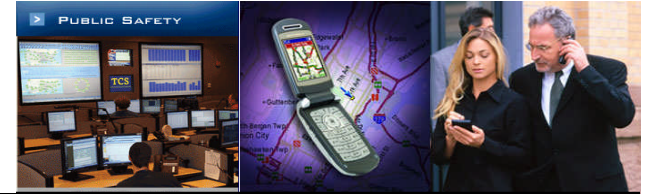
- People should have access to 9-1-1 via text

- Funding guidelines should be adjusted to accommodate automated relay services that provide communications alternatives that may not comply with traditional TRS, but which are popular with the deaf community.

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Thank you
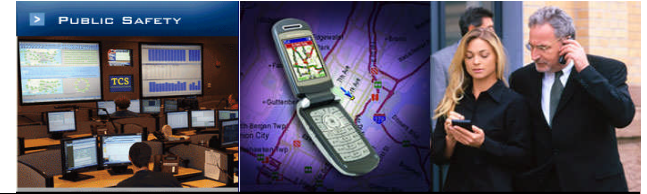
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